

CLAIMS

1. Apparatus for determining compliance with parking rules by a vehicle, comprising:
means for receiving an enquiry signal representing a location selected from a plurality of locations, rule storage means for storing parking rules relating to the plurality of locations, means for obtaining from the rule storage means a rule relating to the selected location, means for determining if a vehicle parked at the selected location complies with the rule, and means for transmitting a compliance signal representing the compliance determination.
2. Apparatus according to Claim 1, wherein the signal receiving means is a wireless signal receiving means.
3. Apparatus according to Claim 1 or 2, wherein the signal receiving means is configured to receive a signal comprising an identification of a signal transmitting unit.
4. Apparatus according to Claim 3, wherein the signal transmitting means is configured to transmit the compliance signal to the signal transmitting unit.
5. Apparatus according to claim 3 or 4, further comprising compliance storage means, the apparatus being configured to record the compliance determination and the identification of the transmitting unit in the compliance storage means.
6. Apparatus according to Claim 3 or 5, wherein the identification of the signal transmitting unit is a secure identification.
7. Apparatus according to claim 3, wherein the identification of the signal transmitting unit further comprises an identification of signal transmitting unit type or enquiry type, the apparatus comprising separate compliance determining means for different unit types and means for directing a signal to the compliance determining means appropriate to the type of transmitting unit.

8. Apparatus according to claim 7, wherein selected separate compliance determining means cannot communicate with one another.

9. Apparatus according to any preceding claim, wherein the signal representing a selected location comprises distant-reference determined coordinates.

10. Apparatus according to claim 9, wherein the signal representing a selected location comprises distant-reference determined coordinates of a vehicle observing unit and coordinates representing the position of the vehicle with respect to the vehicle observing unit.

11. Apparatus according to claim 11, wherein the coordinates representing the position of the vehicle with respect to the vehicle observing unit comprise the distance of the vehicle from the observing unit, the inclination to the horizontal of the line joining the vehicle and the observing unit and the compass bearing of the line joining the vehicle and the observing unit.

12. Apparatus according to any of claims 1-9, being for receiving an enquiry signal from a parking purchase unit, the means for determining if the vehicle parked at the selected location complies with the rule further comprising means for determining a parking fee to be paid for compliance to occur, the compliance signal further comprising an indication of the fee to be paid, the apparatus further comprising fee payment means for receiving payment of a fee from the parking purchase enquiry unit and for transmitting a further compliance signal to the parking purchase unit when the parking has been successfully purchased.

13. A system for determining compliance with parking rules by vehicle, comprising: a plurality of transmitting units for transmitting enquiry signals representing a location selected from a plurality of locations, an apparatus comprising means for receiving an enquiry from a transmitting unit, rule storage means for storing parking rules relating to the plurality of locations, means for obtaining in response to an enquiry signal from a transmitting unit a rule relating to the respective selected location from the rule storage means, means for determining if the rule is infringed by a vehicle parked at the

respective selected location complies with the rule, and means for transmitting a compliance signal representing the compliance determination.

14. A system according to Claim 13, wherein the transmitting unit is a wireless signal transmitting unit and the signal receiving means is a wireless signal receiving means.

15. A system according to Claim 13 or 14, wherein the transmitting unit is configured to transmit a signal comprising an identification of a signal transmitting unit.

16. A system according to Claim 15, wherein the signal transmitting means is configured to transmit the compliance signal to the signal transmitting unit.

17. A system according to claim 15 or 16, further comprising compliance storage means, the apparatus being configured to record the compliance determination and the identification of the transmitting unit in the compliance storage means.

18. A system according to Claim 15 or 17, wherein the identification of the signal transmitting unit is a secure identification.

19. A system according to claim 15, wherein the identification of the signal transmitting unit further comprises an identification of signal transmitting unit type, the apparatus comprising separate compliance determining means for different unit types and means for directing a signal to the compliance determining means appropriate to the type of transmitting unit.

20. A system according to claim 19, wherein selected separate compliance determining means cannot communicate with one another.

21. A system according to any of claims 13 to 20, wherein the signal representing a selected location comprises distant-reference determined coordinates.

22. A system according to claim 21, wherein the signal representing a selected location comprises distant-reference determined coordinates of a vehicle observing unit and coordinates representing the position of the vehicle with respect to the vehicle observing unit.

23. A system according to claim 22, wherein the coordinates representing the position of the vehicle with respect to the vehicle observing unit comprise the distance of the vehicle from the observing unit, the inclination to the horizontal of the line joining the vehicle and the observing unit and the compass bearing of the line joining the vehicle and the observing unit.

24. A system according to any of claims 13-21, wherein the apparatus is for receiving an enquiry signal from a parking purchase unit, the means for determining if the vehicle parked at the selected location complies with the rule further comprising means for determining a parking fee to be paid for compliance to occur, the compliance signal further comprising an indication of the fee to be paid, the apparatus further comprising fee payment means for receiving a payment instruction from the parking purchase unit and for transmitting a further compliance signal to the parking purchase unit when the parking has been successfully purchased.

25. A mobile vehicle observing means for providing data for determining the position of a parked vehicle, comprising:
camera means for obtaining a digital image of at least the registration plate of the vehicle,

position detecting means, for detecting the position of the mobile device,

range determining means for finding the range of the vehicle from the mobile device,

direction determining means for finding the direction of the vehicle with respect to the mobile device, and

transmitting means for transmitting signals representing the image of the vehicle, and the direction and distance of the vehicle from the mobile device to an apparatus.

26. The mobile vehicle observing means according to Claim 25, further comprising means for transmitting an identification of the mobile vehicle observing means to the apparatus.

27. The mobile vehicle observing means of claim 25 or 26, wherein the transmitting means is a wireless transmitting means.

28. The mobile vehicle observing means of any of claims 25 to 27, further comprising user identification means for identifying a user of the mobile vehicle observing means.

29. A device for obtaining parking information for a vehicle, the device being mountable in a vehicle and comprising:

means for determining the position of the vehicle,

transmitting means for transmitting a request to an apparatus, the request comprising an identification of the vehicle position, and a request identification,

receiving means for receiving a parking rule from the apparatus, and means for displaying the parking rule.

30. A device for obtaining parking information according to Claim 29, further comprising means for receiving from the apparatus an indication as to whether parking is permitted and a request for payment of a parking fee, means for transmitting a payment instruction to the apparatus and means for receiving from the apparatus confirmation that the fee has been paid

31. A parking rule compliance determiner, for determining compliance with parking rules by a vehicle, comprising:

a receiver connecting the determiner with a first transmitter for transfer of data representing a location selected from a plurality of locations,
a rule storage device for storing parking rules relating to the plurality of locations,
a processor programmed to :
 obtain from the rule storage device a rule relating to the selected location, and
 determine if a vehicle parked at the selected location complies with the rule, and
a second transmitter for transmitting a compliance signal representing the compliance determination.

32. The parking rule compliance determiner of Claim 31, wherein the receiver is connected to the first transmitter by a wireless link.

33. The parking rule compliance determiner of Claim 31, wherein the data transferred further comprises the satellite determined position of the first transmitter, the distance of the vehicle from the first transmitter, the inclination to the horizontal of the line joining the vehicle and the first transmitter and the compass bearing of the line joining the vehicle and the first transmitter, the processor being further programmed to determine the position of the vehicle from the data.

34. The parking rule compliance determiner of Claim 31, wherein the receiver is configured to receive a parking purchase request from the first transmitter, the processor being further configured to process the parking purchase request.

36. A mobile vehicle observer for providing data for determining the position of a parked vehicle, comprising:
a camera for obtaining a digital image of at least the registration plate of the vehicle,
a position detector, for detecting the position of the mobile device,
a range determiner for finding the range of the vehicle from the mobile device,
a direction determiner for finding the direction of the vehicle with respect to the mobile device, and
a transmitter for transmitting signals representing the image of the vehicle, and the direction and distance of the vehicle from the mobile device to an apparatus.

37. A device for obtaining parking information for a vehicle, the device being mountable in a vehicle and comprising:

a position determiner, for determining the position of the vehicle,
a transmitter for transmitting a request to an apparatus, the request comprising an identification of the vehicle position, and a request identification,
a receiver for receiving a parking rule from the apparatus, and
a display for displaying the parking rule.

38. A process for determining compliance with parking rules by a vehicle, comprising:
receiving an enquiry signal representing a location selected from a plurality of locations,
obtaining from rule storage means for storing parking rules relating to the plurality of locations, a rule relating to the selected location, determining if a vehicle parked at the selected location complies with the rule, and transmitting a compliance signal representing the compliance determination.

39. An apparatus for providing information about compliance with parking rules by a vehicle, comprising means for receiving an enquiry signal from an enquiry unit, the signal representing a location selected from a plurality of locations, rule storage means for storing parking rules relating to the plurality of locations, means for obtaining from the rule storage means a rule relating to the selected location and means for transmitting a signal representing information about the parking rule to the enquiry unit.